

Application No. : 09/898,990  
Filed: July 3, 2001

which is a continuation of Application Serial No. 08/543,789, now U.S. Patent No. 5,782,757, filed October 16, 1995, which is a continuation-in-part of Application Serial No. 08/333,132, filed November 1, 1994, now U.S. Patent No. 5,638,818, which is a continuation-in-part of Application Serial No. 07/672,890, filed March 21, 1991, now abandoned.

### IN THE CLAIMS:

For convenience, all pending claims are presented below, with the respective status of each claim shown in parentheses after the claim number. Attached hereto is a marked-up version of the changes made to Claims 22-25.

<sup>8</sup>22. (Amended) A disposable optical probe for use with a physiological measurement device, said optical probe comprising:

at least one light emitter adapted to transmit optical radiation into a first side of a medium;

a detector adapted to receive an attenuated portion of the optical radiation after being transmitted through the medium to a second side;

a disposable substrate carrying the at least one emitter and detector; and  
an optical obstruction between the at least one emitter and said detector which reduces piping of the optical radiation between said at least one emitter and said detector without transmission through the medium, when said optical probe is affixed to a portion of a patient.

<sup>9</sup>23. (Amended) The disposable optical probe of Claim <sup>8</sup>22, wherein said optical obstruction comprises an aperture in said disposable substrate between the at least one emitter and the detector.

<sup>10</sup>  
~~24.~~ (Amended) A disposable optical sensor for use in physiological monitoring comprising;

at least one emitter which emits light;

a detector which receives the light after non-reflective transmission through tissue of a patient;

a disposable substrate which positions said emitter and said detector proximate to said tissue; and

an optical barrier between the at least one emitter and the detector to substantially obstruct the emitted light from transmitting along the disposable substrate between said at least one emitter and said detector without having passed through the tissue of the patient when said disposable optical sensor is affixed to a patient.

<sup>11</sup>  
~~25.~~ (Amended) The disposable optical sensor of Claim <sup>10</sup>~~24~~, wherein said optical barrier comprises an aperture in said disposable substrate between the at least one emitter and the detector.

Please add the following new Claims.

<sup>12</sup>  
~~26.~~ (Newly Added) The disposable optical probe of Claim <sup>8</sup>~~22~~, wherein said optical obstruction comprises an opaque shield having at least one surface between the at least one emitter and the detector, the at least one surface reducing the piping of the optical radiation.

<sup>13</sup>  
~~27.~~ (Newly Added) The disposable optical probe of Claim <sup>12</sup>~~26~~, wherein the opaque shield forms a receptacle adapted to receive the detector.

<sup>14</sup>  
~~28.~~ (Newly Added) The disposable optical probe of Claim <sup>13</sup>~~27~~, wherein the receptacle is rectangular.

<sup>15</sup>  
~~29.~~ (Newly Added) The disposable optical probe of Claim <sup>12</sup>~~26~~, wherein the opaque shield comprises an opaque cover.

<sup>16</sup>  
~~30.~~ (Newly Added) The disposable optical probe of Claim <sup>15</sup>~~29~~, wherein the opaque cover covers one of the at least one emitter and the detector.

<sup>17</sup>  
~~31~~. (Newly Added) The disposable optical sensor of Claim <sup>10</sup>~~24~~, wherein the optical barrier comprises an opaque material.

<sup>18</sup>  
~~32~~. (Newly Added) The disposable optical sensor of Claim <sup>10</sup>~~24~~, wherein the optical barrier comprises a cavity adapted to receive the detector.

<sup>19</sup>  
~~33~~. (Newly Added) The disposable optical sensor of Claim <sup>18</sup>~~32~~, wherein the cavity is rectangular.

<sup>20</sup>  
~~34~~. (Newly Added) The disposable optical sensor of Claim <sup>10</sup>~~24~~, wherein the optical barrier comprises a cover over one of the at least one emitter and the detector.

<sup>21</sup>  
~~35~~. (Newly Added) A method of reducing light from at least one emitter which reaches a detector without non-reflectively passing through a medium, the method comprising:

providing a disposable tape adapted to position at least one emitter and a detector on opposite sides of a measurement site such that light from the at least one emitter is transmitted through the measurement site to the detector; and

including a light piping barrier with the disposable tape adapted to reduce the light from the at least one emitter which reaches the detector without first being transmitted through the measurement site.

<sup>21</sup>  
<sup>22</sup>~~36~~. (Newly Added) The method of Claim <sup>21</sup>~~35~~, wherein the step of adding the light piping barrier comprises forming the light piping barrier from the disposable tape.

<sup>21</sup>  
<sup>23</sup>~~37~~. (Newly Added) The method of Claim <sup>21</sup>~~35~~, wherein the light piping barrier comprises an opaque material.

<sup>21</sup>  
<sup>24</sup>~~38~~. (Newly Added) The method of Claim <sup>21</sup>~~35~~, further comprising receiving the detector in a cavity of the light piping barrier.

<sup>24</sup>  
<sup>25</sup>~~39~~. (Newly Added) The method of Claim <sup>24</sup>~~38~~, wherein the cavity is rectangular.

<sup>21</sup>  
<sup>26</sup>~~40~~. (Newly Added) The method of Claim <sup>21</sup>~~35~~, further comprising covering one of the at least one emitter and the detector with the light piping barrier.